

CONTRIBUTIONS TO A KNOWLEDGE OF AUSTRALIAN *CULICIDÆ*. No. iii.\*

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The present paper contains descriptions of five new species, with notes on synonymy, and additional records for previously known species.

The male of *Stegomyia tasmaniensis* Str., and the female of *Danielsia minuta* Taylor, are described for the first time.

The new species are distributed in the following genera:—*Stegomyia* (one), *Huleceteomyia* (one), *Culicada* (one), *Leucomyia* (one), and *Lophoceratomyia* (one). The type-specimens have been deposited in the Institute-Collection.

STEGOMYIA TASMANIENSIS Strickland.

Entomologist, xliv., No. 578, p. 249 (1911).

♂. Similar to ♀; palpi black; antennæ pale, nodes and last two segments dark, plumes black; fore- and mid-ungues unequal, the larger stout, uniserrate, hind equal and simple. Length, 5 mm.

*Hab.*—Tasmania: Devonport and St. Patrick's River, Springfield, Bridport (F. M. Littler), New River District (W. H. Twelvetrees).

Evidently a widely distributed species, as it has been found in scattered localities, from Northern to Southern Tasmania. Mr. Twelvetrees has found it, in fairly large numbers, in the New River District. This is the first occasion on which the male has been found.

Co-type in Coll. F. M. Littler.

\* Continued from these Proceedings, 1915, p. 184.

## STEGOMYIA DALIENSIS, sp.n.

Head pale-scaled. Thorax with dark brown scales. Legs unbanded. Abdomen with basal banding.

♀. Head entirely covered with pale scales, with black, upright-forked ones on the vertex; antennae dark brown, basal lobes and base of second segment yellowish; palpi clothed with dark scales; proboscis black.

Thorax brown, clothed with dark brown, narrow-curved scales, and numerous black bristles over the wing-roots; scutellum brown, clothed with pale scales; posterior border-bristles black; pleurae yellowish, clothed with pale scales and a few dark bristles.

Abdomen clothed with black scales, first segment with numerous dark bristles in addition; segments two to four with pale basal bands, segments five and six with basal lateral pale spots, seventh and eighth without bands or spots; venter with pale scales.

Legs: coxae and trochanters pale, clothed with dark bristles; femora with basal half pale beneath, rest of the femora, the tibiae, and tarsi dark brown; unguis all equal and simple.

Wings with the scales on the costa, subcostal, and first long vein dark brown, brown on remaining veins: first fork-cell longer and narrower than the second, base of the latter nearer the base of the wing; stem of the first fork-cell more than two-thirds the length of the cell, stem of the second a little more than half the length of its cell; anterior basal cross-vein longer than, and about once and one-half its length from the anterior cross-vein; fringe light brown. Halteres with pale stems and dark knobs.

Length, 4 mm. (vix).

*Hab.*—Northern Territory: Daly River (G. F. Hill).

## MIMETEOMYIA ORNATA Taylor.

*Stegomyia ornata* Taylor, Trans. Ent. Soc. London, 1914, p.189.

A re-examination of the unique type of the above shows that it should, properly, be placed in the genus *Mimeteomyia*, on account of the very bristly and truncated apex of the abdomen, and other points of agreement with the genus.

There is an error in the description, the specimen being a female, and not a male.

MIMETEOMYIA QUASIORNATA Taylor.

*Stegomyia quasiornata* Taylor, these Proceedings, 1915, p.177, Pl. xxviii., fig.2.

This, like the above species, is placed in *Mimeteomyia*, as it is more closely related to this genus than to *Stegomyia*. The ♂ sign in the first line of the description should be deleted, as only the ♀ is known.

MIMETEOMYIA HILLI Taylor.

*Stegomyia hilli* Taylor, these Proceedings, 1914, p.456, Pl. xxxv., fig.5.

Mr. Edwards recently suggested to me *in litt.*, that this species and *S. quasiornata* would be more correctly placed in the genus *Mimeteomyia*. A re-examination of the type proves that such is the case, on the same grounds as stated under *M. ornata* Taylor.

HULECETEOMYIA MILSONI, sp.n.

Head with brown and white scales. Thorax clothed with bronze and pale scales. Abdomen with white basal banding. Legs with basal banding.

♀. Head clothed with dark brown and white flat scales, white narrow-curved and black upright-forked ones in the middle with a narrow, median line of broad spindle-shaped ones in addition; palpi black, first and second segments and apex with narrow apical banding; antennæ black, basal lobes black, with small, broad, white, flat scales, second joint similarly clothed; proboscis black.

Thorax with bronze-coloured, narrow-curved scales, and pale ones, more numerous laterally, a patch of broad white flat ones anterior to the scutellum, the latter clothed with white spindle-shaped scales; pleurae dark brown, densely clothed with white, flat scales; prothoracic lobes similarly clad.

Abdomen black, first segment black, with a few white scales

in the centre, and numerous yellowish bristles, the second to sixth with white basal banding; venter dark with white basal lateral patches, penultimate segment mottled with white scales.

Wings with vein-scales brown; first fork-cell longer and narrower than the second, base of the former slightly nearer the base of the wing; stem of the first about half, of the second about two-thirds the length of the cells; anterior basal cross-vein longer than and about half its length from the anterior cross-vein; fringe brown.

Legs black, femora mottled with white scales, basal half pale beneath, knee-spot white; first three tarsals of fore- and mid-legs with white basal banding, that on the third not so prominent, first four tarsals of the hind-legs with broad white basal banding; unguis equal and uniserrate.

Length, 5 mm.

*Hab.*—N.S.W.: Milson Island (Dr. Cleland).

Co-type in Coll. Cleland.

#### DANIELSIA MINUTA Taylor.

Bull. Northern Territory, No. i., p.60 (1912).

♀. Head clothed with pale flat scales, with brown narrow-curved and upright-forked ones in the centre; antennæ and palpi brown.

Thorax light brown, with pale narrow-curved scales, border-bristles brown, scutellum pale [denuded]; pleuræ brown with patches of white flat scales.

Abdomen brown-scaled, unbanded, first six segments with white basal lateral spots; venter brown.

Wings: costa black, vein-scales brown; first fork-cell longer and narrower than the second, base of the former nearer the base of the wing, stem of the first about half the length of its cell, stem of the second about the length of the cell; anterior basal cross-vein shorter than, and about thrice its length from, the anterior cross-vein; fringe brown.

Length, 2.5 mm.

*Hab.*—Northern Territory: Darwin (G. F. Hill).

Described from a single specimen. The type (♂) was in very poor condition, hence the above detailed description of the ♀. There are certain discrepancies in the two descriptions concerning the abdomen, but I feel sure they belong to the same species.

Mr. Hill notes that, when at rest, the ♀ carries the hind legs backwards over the abdomen.

CULICADA HYBRIDA, sp.n.

Head with pale and brown scales. Thorax with bronze-coloured scales with golden reflections. Abdomen unbanded. Tarsi with basal banding.

♀. Head densely clothed with pale and brown narrow-curved scales, with mixed pale and black upright-forked scales; palpi black, with a few white scales at the apex of the second segment, apex white-scaled; antennæ brown, verticillate hairs brown, pubescence pale; proboscis black.

Thorax chestnut, clothed with bronze-coloured scales with golden reflections; scutellum paler than the thorax, with pale scales; pleuræ pale brown, with small white flat scales.

Abdomen clothed with dusky scales, unbanded, segments four to six with conspicuous white lateral spots, border-bristles pale; venter mottled with brown and pale scales.

Wings: costa, sub-costal, and first long vein with violet-black scales, remaining vein-scales dusky; first fork-cell longer and narrower than the second, their bases about level, stem of the first about two-thirds the length of the cell, of the second about as long as its cell; anterior basal cross-vein about the length of, and about once and one-half its length from, the anterior cross vein; fringe dusky.

Legs black, femora mottled with pale scales, knee-spots creamy, first three tarsals of fore- and mid-legs with white basal banding, fourth and fifth unbanded, first four tarsals of hindlegs similarly banded, fifth unbanded; unguis equal, uniserrate.

Length, 4.5 mm.

*Hab.* -N.S.W.: Milson Island (Dr. J. B. Cleland).

Type unique. It may be distinguished from *C. bupengaryensis*

Theob., by the differently coloured thorax, the abdomen with but three segments with basal lateral spots, the basally banded tarsi, and the hind-angues being uniserrate.

*CULICADA DEMANSIS* Strickland.

Entomologist, xliv., No.577, p.202 (1911).

*Hab.*—N.S.W.: Milson Island.—Tasm.: Hillwood (F. M. Littler).

Two specimens received from Dr. Cleland differ from the Tasmanian specimens in the Institute-Collection only in having the stems of the fork-cells shorter.

*CULICADA TASMANIENSIS* Strickland.

Entomologist, xliv., No.576, p.181 (1911).

Additional specimens have been received from Mr. Littler, and Mr. W. H. Twelvetreves *per* Mr. Littler. This seems to be the commonest and most widely distributed Tasmanian species.

*Hab.*—Tasm.: Devonport, Springfield, St. Patrick's River (F. M. Littler), New River District (W. H. Twelvetreves).

*LEUCOMYIA VICINA*, sp.n.

Head and anterior two-thirds of thorax white-scaled. Abdomen with white basal banding. Tarsi basally banded white.

♂. Head clothed with white scales; antennæ pale, nodes black, plumes dark; palpi black; penultimate and apical segments with a narrow white basal band, apical half of the apical segment white, hairs black except on apical half of last segment; proboscis black, a white band at the apex of the middle third, with a small tuft of hairs beneath at its base.

Thorax with anterior two-thirds clothed with dense white scales, laterally a dense row of flat white ones, posterior third and scutellum covered with brown narrow-curved scales; pre-alar bristles brown; pleuræ brown, clothed with scattered white scales.

Abdomen black-scaled, with white basal banding, seventh and eighth apically banded also, lateral and posterior border-bristles golden; venter pale-scaled.

Legs black, femora pale beneath, first to fourth tarsi of fore- and mid-legs with creamy basal banding, all tarsi of hind-legs with similar banding; ungues of fore- and mid-legs unequal, the larger uniserrate, hind equal and simple.

Wings: costa dark brown, vein-scales light brown: first fork-cell longer and narrower than the second, base of the former nearer the base of the wing, stem of the first about two-thirds the length of the cell, that of the latter about the length of its cell; anterior basal cross-vein longer than, and about twice its length from, the anterior cross-vein.

♀. Similar to ♂ [head damaged]; ungues equal and simple. Wings more densely scaled; costa, subcosta, and first long vein black, remaining veins with dark brown scales; in other respects as in the ♂.

Length, ♂, 4.5; ♀, 5 mm.

*Hab.*—Northern Territory: Stapleton (G. F. Hill, No.313).

Closely related to *L. annulata* Taylor, but may be distinguished by the absence of apical banding on the palpi and first tarsals, the brown-scaled scutellum, the pale venter, and wing-venation; from *L. plegipennis* Theob., by the thoracic flat scales and the wing-venation.

#### CULICELSA ABDOMINALIS Taylor.

Report Aust. Inst. Tropical Med., 1911, p.53 (1913).

*Hab.*—Northern Territory: Darwin (G. F. Hill).

#### CULEX SITIENS Wiedemann.

*Culex saibaii* Taylor, Ann. Rep. Commissioner Public Health, Queensland, 1912, p.28.

Having compared the type of *C. saibaii* with a long series of *C. sitiens*, I find that they are one and the same species, and, therefore, place the former name as a synonym of the latter.

#### CULEX SAGAX Skuse.

Proc. Linn. Soc. N. S. Wales, (2), iii., p.1744 (1888); Taylor, *op. cit.*, 1914, p.758.

A specimen, received from Dr. Cleland, differs somewhat from the type in having the thorax chestnut, with a median black narrow stripe, and clothed with golden scales, the tarsi of the hind-legs with basal pale banding; the stem of the first fork-cell about two-thirds the length of the cell, and that of the second the length of the cell; abdomen, beneath, with basal creamy banding to the segments.

Until further specimens are available, it is thought best to retain it under the above name.

*Hab.*—N.S.W.: Wollongong.

CULEX SOMERSETI Taylor.

Ann. Report Commissioner Public Health, Queensland, 1912, p.28.

This species, though closely related to *C. sitiens* Wied., appears to be a good one, the leg-banding being prominent and well defined.

Through an error in setting up the type, the abdominal characters were omitted. They are as follows:—Abdomen black, first segment black-scaled with numerous yellowish hairs, remaining segments with white basal banding; venter pale-scaled.

*Hab.*—N. Queensland: Somerset (F. H. Taylor).

BANKSINELLA LINEATOPENNIS Ludlow.

Canadian Entomologist, xxxvii., p.133(1915); *Pseudohowardina linealis* Taylor, Rep. Aust. Inst. Trop. Med., 1911, p.57 (1913); Edwards, Bull. Ent. Research, v., p.274(1915).

Specimens of *B. lineatopennis* Ludlow, were recently received from The Imperial Bureau of Entomology, which proved to be the same as *P. linealis* mihi. It is evidently a widely distributed species, as it extends from South Africa through the Philippine Islands to Australia.

LOPHOCERATOMYIA ANNULATA, sp.n.

Head-scales dark and pale; palpi longer than proboscis. Thorax with small, bronze-coloured, narrow-curved scales. Abdomen dark brown, with basal banding. Legs brown, unbanded.

♂. Head dark brown, clothed with brown narrow-curved scales medially, rest of head with small flat pale ones; proboscis brown; palpi brown, with a conspicuous thumb-like process on each side at the base, longer than proboscis by the apical third of the penultimate and apical segments, apex of the first and the last two segments clothed with brown hairs; antennæ pale, nodes and last two segments brown, plumes brown, dense, the flat plates on the sixth segment long and black, seventh and eighth segments with short black wavy plates, those on the ninth longer, black, spoon-shaped toward the apex, the pectinated processes on the nodes of the tenth to thirteenth segments conspicuous.

Thorax chestnut-brown, clothed with small narrow-curved, bronze-coloured scales; scutellum paler, with similar narrow-curved scales; pleuræ brown, clothed with brown bristles.

Abdomen clothed with black scales, first segment densely clothed with brown hairs, segments three to seven with basal grey-white bands, scales on eighth segment paler; genitalia light brown with numerous brown hairs; posterior border-bristles yellowish-brown; venter brown.

Legs black, unbanded, femora pale beneath; ungues of fore-legs very unequal, the larger with a stout tooth, mid-unequal, the larger with a small tooth, in both the fore- and mid-ungues the larger is sickle-shaped, the smaller almost straight, hind small, equal and simple.

Wings: the costa, subcostal, and first long veins with dark brown scales, remaining vein-scales paler: first fork-cell longer and narrower than the second, base of the former slightly nearer the base of the wing: stem of the first fork-cell about half, of the second fork-cell about two-thirds, the length of their cells; anterior basal cross-vein about as long as, and about once and a half its length from, the anterior cross-vein; second incrossation well defined; fringe dusky; halteres with pale stems and brown knobs.

♀. Similar to ♂; antennæ brown, verticillate hairs dark brown, pubescence pale; palpi with mixed dark and pale scales; pro-

boscis dark brown; abdomen, wings, and legs similar to ♂, ungues equal and simple.

Length, ♂, 3.75-4; ♀, 4 mm.

*Hab.*—N. Territory: Stapleton and Daly River (G. F. Hill, Nos.309-312).

Related to *L. fraudatrix* Theob., but distinguished from it by the banded abdomen, ungues, and the palpi possessing but *one* process on each side of their bases. It differs from *L. tenuata* Leic., by the length of the palpi, the ungues, and the wing-venation.

Co-type (♂) in Coll. Hill.

#### ETORLEPTIOMYIA ELEGANS Taylor.

*Diromyia elegans* Taylor, Trans. Ent. Soc. Lond, 1914, p.703, Pls. xliii., xlv., figs.19, 18.

There is a close similarity between *Etorleptiomyia* Theobald, and *Diromyia* Taylor, the chief difference being in the disposition of the head-scales of the two genera. Whereas they are all "mixed" in the former, they are more or less separated into well defined areas in the latter. It is, perhaps, better that *Diromyia* be sunk as a synonym of *Etorleptiomyia*, and the species regarded, for the present, as an aberrant form of the genus *Etorleptiomyia*,

#### ÆDEOMYIA VENUSTIPES (Skuse).

Proc. Linn. Soc. N. S. Wales, (2) iii., p.1761 (1888); Taylor, *op. cit.*, 1913, Pl. xxx., fig.3; *Æ. catasticta* Knab, Ent. News, xx., p.387 (1909).

The above synonymy is based on specimens of *Æ. catasticta* Knab, recently received from The Imperial Bureau of Entomology, which have been compared with specimens of *Æ. venustipes* (Skuse).

The differences between the two forms are so slight, that they do not seem to me to be of sufficient value to warrant the retention of the two names as distinct species, but the name *catasticta* might be retained as a varietal name for the form described by Knab. The only distinctions found between the specimens examined were the presence of ochre-yellow scales on the base of

the wings of *E. catasticta*, and the smaller number of white spots on the wings. Also, in *E. venustipes*, the mesonotal scales are paler than in *E. catasticta*, but are still a distinct ochre-yellow. In all other respects, the two forms agree.

The possibility of the above synonymy was suggested to me some time ago by Mr. F. W. Edwards.

The Institute-specimens of *E. catasticta* Knab, come from Bole, Gold Coast, W. Africa. Knab described it from the Philippine Islands.